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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,684	10/24/2001	D. Gregory More	102175-200	4640

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WIGGIN & DANA LLP  
ATTENTION: PATENT DOCKETING  
ONE CENTURY TOWER, P.O. BOX 1832  
NEW HAVEN, CT 06508-1832

EXAMINER

BANNAPRADIST, LISA M

ART UNIT PAPER NUMBER

3676

DATE MAILED: 01/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/002,684

Applicant(s)

MORE ET AL.

Examiner

Lisa Bannapradist

Art Unit

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I (claims 1-9) in Paper No. 6 is acknowledged. The traversal is based upon MPEP § 803 that a serious burden is not placed upon the examiner to search both inventions at the same time. This is not found persuasive because in the instant application, the search for Group I is not required for Group II. The search for Group II has not been completely formulated but it includes classes 29, 72, 65 and 264. A search of these classes is not required for Group I drawn to the article. Accordingly, the restriction requirement is still deemed proper and is therefore made FINAL.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the radial section must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 3676

A person shall be entitled to a patent unless –

(e) the invention was described in-  
a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. **Claims 1-7** are rejected under 35 U.S.C. 102(e) as being anticipated by Halling (US 6,27,546).

**Halling** discloses an annular seal having a central longitudinal axis and forming a seal between interior and exterior volumes (HP and LP) and flanges (40). The seal comprises first and second portions (20, 22), radial section (12), a first layer (towards 26, 27) and a second layer (towards 24, 25) where the second layer has a higher resistance to stress than the first layer (col. 3, lines 27-41). The layers consist of a nickel-based superalloy (col. 3, lines 22-25). The layers provide at least 10% of the radial span and compressive strength of the seal (col. 2, lines 20-25 and lines 50-55).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 8 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Halling in view of Rynders et al. (US 6,302,402).

Halling fails to disclose a target thermal operating condition within applicant's specified range. **Rynders** teaches an annular seal (Fig. 6G) which operates at a target thermal condition from 871°C -1093°C (col. 4, line 58) for the purpose of permitting the seal to operate through multiple thermal cycles (abstract) without cracking for use in high-temperature applications. It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to create an annular seal capable of withstanding higher temperatures in the range specified by applicant for the purpose of operating the seal through multiple thermal cycles without cracking in an environment where the materials to be sealed have different coefficients of thermal expansion.

Halling discloses a second layer of nickel-based superalloy but fails to disclose a specific formation of the second layer. **Rynders** teaches that the second layer includes cast-hardened nickel (cols. 7-8, lines 61-5) for the purpose of conforming to the minor irregularities of the first layer, thus forming an outer boundary that improves seal performance (col. 8, line 53). It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to create the second layer of Halling's invention specifically with cast-hardened nickel for the purpose of coating the first layer in order to compensate for minor irregularities on the first layer, thus improving seal performance.

Art Unit: 3676

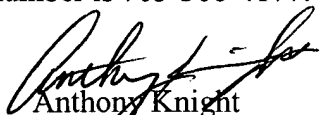
*Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US 5,249,814 to Halling, US 6,325,392 to Halling and US Application 2002/0117814 to Halling et al.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa Bannapradist whose telephone number is 703-305-4806. The examiner can normally be reached on Mon-Thurs and every other Friday from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4177.

  
Anthony Knight  
Supervisory Patent Examiner  
Technology Center 3600

lb  
January 24, 2003